

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 (currently amended). A device, comprising:

at least one printed circuit board having contact terminals with central blind openings formed therein, said central blind openings having a top region and a bottom region with greater dimensions than said top region; and

at least one semiconductor component having external contacts connected to said contact terminals on said printed circuit board, said external contacts of said semiconductor component protrude into said central blind openings and being in ~~one of~~ ~~a force locking engagement and~~ a form-locking engagement with said contact terminals.

2 (canceled).

3 (currently amended). The device according to claim 1 ~~2~~, wherein said central blind openings are slot shaped.

4 (currently amended). ~~The device according to claim 1,~~  
~~wherein~~ A device, comprising:

at least one printed circuit board having contact terminals  
with central blind openings formed therein, said central  
blind openings in said contact terminals ~~are~~ being pillar  
shaped; and

at least one semiconductor component having external contacts  
connected to said contact terminals on said printed circuit  
board, said external contacts of said semiconductor component  
protrude into said central blind openings and being in one of  
a force-locking engagement and a form-locking engagement with  
said contact terminals.

5. (currently amended). ~~The device according to claim 1,~~  
~~wherein~~ A device, comprising:

at least one printed circuit board having contact terminals  
with central blind openings formed therein, said contact  
terminals ~~have~~ having a base area and a top surface, ~~and~~  
said central blind openings ~~have~~ having a truncated cone  
shape with a base area disposed in a region of said base area  
of said contact terminals and a tip positioned level to said  
top surface of said contact terminals; and

at least one semiconductor component having external contacts connected to said contact terminals on said printed circuit board, said external contacts of said semiconductor component protrude into said central blind openings and being in one of a force-locking engagement and a form-locking engagement with said contact terminals.

6 (currently amended). ~~The device according to claim 1,~~  
~~wherein:~~ A device, comprising:

at least one printed circuit board having contact terminals with central blind openings formed therein; and

at least one semiconductor component having external contacts connected to said contact terminals on said printed circuit board, said external contacts of said semiconductor component protrude into said central blind openings and being in one of a force-locking engagement and a form-locking engagement with said contact terminals, said semiconductor component having  
~~has~~ a contact area, ~~and~~ said external contacts of said semiconductor component have a rivet form in cross section, said rivet form having a rivet head connected to said contact area of said semiconductor component and a rivet tip protruding out from said semiconductor component.

7 (original). The device according to claim 6, wherein said rivet tip of said rivet form has smaller dimensions than said central blind openings of said contact terminals of said printed circuit board, said rivet form having a foot region with greater dimensions than said central blind openings.

8 (currently amended). ~~The device according to claim 1,~~  
~~wherein~~ A device, comprising:

at least one printed circuit board having contact terminals  
with central blind openings formed therein; and

at least one semiconductor component having external contacts  
connected to said contact terminals on said printed circuit  
board, said external contacts of said semiconductor component  
protrude into said central blind openings and being in one of  
a force-locking engagement and a form-locking engagement with  
said contact terminals, said external contacts of said  
semiconductor component have a frustoconical shape in cross  
section, said frustoconical shape having a tip with smaller  
dimensions than said central blind openings and a foot region  
with greater dimensions than said central blind openings.

9 (original). The device according to claim 1, wherein said printed circuit board is a multi-layered ceramic printed circuit board.

10 (original). The device according to claim 1, wherein said printed circuit board is a multi-layered plastic printed circuit board.

11 (currently amended). ~~The device according to claim 1,~~  
~~wherein~~ A device, comprising:

at least one printed circuit board having contact terminals  
with central blind openings formed therein, said printed  
circuit board ~~has~~ having conductor tracks and under each of  
said central blind openings a via in contact with said  
conductor tracks; and

at least one semiconductor component having external contacts  
connected to said contact terminals on said printed circuit  
board, said external contacts of said semiconductor component  
protrude into said central blind openings and being in one of  
a force-locking engagement and a form-locking engagement with  
said contact terminals.

12 (currently amended). ~~The device according to claim 1,~~  
~~wherein~~ A device, comprising:

at least one printed circuit board having contact terminals  
with central blind openings formed therein; and

at least one semiconductor component having external contacts  
connected to said contact terminals on said printed circuit  
board, said external contacts of said semiconductor component  
protrude into said central blind openings and being in one of  
a force-locking engagement and a form-locking engagement with  
said contact terminals, said external contacts of said  
conductor component are being formed from a plastically  
deformable metal alloy.

13 (currently amended). ~~The device according to claim 1,~~  
~~wherein~~ A device, comprising:

at least one printed circuit board having contact terminals  
with central blind openings formed therein; and

at least one semiconductor component having external contacts  
connected to said contact terminals on said printed circuit  
board, said external contacts of said semiconductor component  
protrude into said central blind openings and being in one of

a force-locking engagement and a form-locking engagement with  
said contact terminals, said external contacts of said  
semiconductor component being are formed from a silver solder  
alloy.

14 (currently amended). ~~The device according to claim 1,~~  
~~wherein~~ A device, comprising:

at least one printed circuit board having contact terminals  
with central blind openings formed therein; and

at least one semiconductor component having external contacts  
connected to said contact terminals on said printed circuit  
board, said external contacts of said semiconductor component  
protrude into said central blind openings and being in one of  
a force-locking engagement and a form-locking engagement with  
said contact terminals, said external contacts of said  
semiconductor component being are formed of a material that  
is softer than a material of said contact terminals of said  
printed circuit board.

15 (currently amended). ~~The device according to claim 1,~~  
~~wherein~~ A device, comprising:

at least one printed circuit board having contact terminals  
with central blind openings formed therein, said contact  
terminals are being formed from a copper alloy; and

at least one semiconductor component having external contacts  
connected to said contact terminals on said printed circuit  
board, said external contacts of said semiconductor component  
protrude into said central blind openings and being in one of  
a force-locking engagement and a form-locking engagement with  
said contact terminals.

16 (withdrawn). A method of establishing an  
electromechanical connection between at least one  
semiconductor component and at least one printed circuit  
board, which comprises the steps of:

providing the semiconductor component with external contacts  
having a form selected from the group consisting of a rivet  
form and a frustoconical form;

providing the printed circuit board with contact terminals  
having central blind openings formed therein; and

aligning and bringing together the semiconductor component  
and the printed circuit board, so that the external contacts



of the semiconductor component engage at least one of force-lockingly in the central blind openings of the contact terminals of the printed circuit board with a pressing force being applied and form-lockingly in the central blind openings with plastic deformation of the external contacts occurring.

17 (withdrawn). The method according to claim 16, which comprises filling an intermediate space disposed between the semiconductor component and the printed circuit board with a filler.

18 (withdrawn). The method according to claim 17, which comprises using a two-component adhesive as the filler.

19 (withdrawn). The method according to claim 18, wherein the external contacts of the semiconductor component are held by a micromechanical clamping effect in the central blind openings of the contact terminals of the printed circuit board during the filling step resulting in an adhesive bonding of the semiconductor component to the printed circuit board for forming the electromechanically connection.